

What is claimed:

1. A ceramic article having a composition comprising $u (\text{Al}_2\text{O}_3\text{-TiO}_2) + v (\text{R}) + w (3\text{Al}_2\text{O}_3\text{-2SiO}_2) + x (\text{Al}_2\text{O}_3) + y (\text{SiO}_2) + z (1.1\text{SrO-1.5Al}_2\text{O}_3\text{-13.6SiO}_2\text{-TiO}_2) + a (\text{Fe}_2\text{O}_3\text{-TiO}_2) + b (\text{MgO-2TiO}_2)$, where, R is $\text{SrO-Al}_2\text{O}_3\text{-2SiO}_2$ or $11.2\text{SrO-10.9Al}_2\text{O}_3\text{-24.1SiO}_2\text{-TiO}_2$, where u, v, w, x, y, z, a and b are weight fractions of each component such that $(u+v+w+x+y+z+a+b=1)$, and $0.5 < u \leq 0.95$, $0.01 < v \leq 0.5$, $0.01 < w \leq 0.5$, $0 < x \leq 0.5$, $0 < y \leq 0.1$, $0 < z \leq 0.5$, $0 < a \leq 0.3$, and $0 < b \leq 0.3$.
2. The ceramic article of claim 1 wherein R is $\text{SrO-Al}_2\text{O}_3\text{-2SiO}_2$.
3. The ceramic article of claim 1 wherein R is $11.2\text{SrO-10.9Al}_2\text{O}_3\text{-24.1SiO}_2\text{-TiO}_2$.
4. The ceramic article of claim 1 having a CTE, as measured from room temperature to 800°C - 1000°C of less than $45 \times 10^{-7}/^\circ\text{C}$.
5. The ceramic article of claim 4 having a CTE, as measured from room temperature to 800°C - 1000°C of less than $25 \times 10^{-7}/^\circ\text{C}$.
6. The ceramic article of claim 5 having a CTE, as measured from room temperature to 800°C - 1000°C of less than $5 \times 10^{-7}/^\circ\text{C}$.
7. The ceramic article of claim 1 having a porosity of up to 60% by volume.
8. The ceramic article of claim 7 having a porosity of up to 45% by volume.
9. The ceramic article of claim 8 having a porosity of up to 55% by volume.
10. The ceramic article of claim 1 having a median pore size of up to 25 micrometers.
11. The ceramic article of claim 10 having a median pore size of up to 20 micrometers.
12. The ceramic article of claim 11 having a median pore size of up to 15 micrometers.
13. The ceramic article of claim 1 having a four-point modulus of rupture as measured on a solid rod of circular cross section of greater than 400 pounds per inch (psi).

14. The ceramic article of claim 13 having a four-point modulus of rupture as measured on a solid rod of circular cross section of greater than 700 psi.
15. A diesel particulate filter comprising the ceramic article of claim 1 and a plugged, wall-flow honeycomb filter body comprising a plurality of parallel end-plugged cell channels traversing the body from a frontal inlet end to an outlet end thereof.
16. The diesel particulate filter of claim 15 wherein the ceramic article has a composition comprising $u (\text{Al}_2\text{O}_3\text{-TiO}_2) + v (\text{R}) + w (3\text{Al}_2\text{O}_3\text{-2SiO}_2) + x (\text{Al}_2\text{O}_3) + y (\text{SiO}_2) + z (1.1\text{SrO-1.5Al}_2\text{O}_3\text{-13.6SiO}_2\text{-TiO}_2) + a (\text{Fe}_2\text{O}_3\text{-TiO}_2) + b (\text{MgO-2TiO}_2)$, where, R is $\text{SrO-Al}_2\text{O}_3\text{-2SiO}_2$ or $11.2\text{SrO-10.9Al}_2\text{O}_3\text{-24.1SiO}_2\text{-TiO}_2$, where u, v, w, x, y, z, a and b are weight fractions of each component such that $(u+v+w+x+y+z+a+b=1)$, and $u = 0.6965, v = 0.225, w = 0.075, x = 0, y = 0, z = 0, a = 0.0035$, and $b = 0$.
17. The diesel particulate filter of claim 16 having a CTE, as measured from room temperature to 800°C - 1000°C of less than $15 \times 10^{-7}/^\circ\text{C}$.
18. The diesel particulate filter of claim 17 having a CTE, as measured from room temperature to 800°C - 1000°C of less than $5 \times 10^{-7}/^\circ\text{C}$.
19. The diesel particulate filter of claim 16 having a porosity of 30% to 50% by volume.
20. The diesel particulate filter of claim 19 having a porosity of 35% to 45% by volume.
21. The diesel particulate filter of claim 16 having a median pore size of 5 to 25 micrometers.
22. The diesel particulate filter of claim 21 having a median pore size of 10 to 15 micrometers.
23. The diesel particulate filter of claim 16 having a modulus of rupture as measured by on a cellular bar having a cell density of 200 cpsi and 0.016 inch thick walls, of 150 to 400 psi.
24. The diesel particulate filter of claim 23 having a modulus of rupture as measured by on a cellular bar having a cell density of 200 cpsi and 0.016 inch thick walls of 150 to 300 psi.
25. The diesel particulate filter of claim 16 having a permeability of at least $0.20 \times 10^{-12} \text{ m}^2$.

26. The diesel particulate filter of claim 25 having a permeability of at least $0.33 \times 10^{-12} \text{ m}^2$.
27. The diesel particulate filter of claim 16 having a pressure drop of 5 kPa or less at an artificial carbon soot loading of up to 5 g/L and a flow rate of 210 standard cubic feet per minute (scfm) for a cell density of 273 cells per square inch and a cell wall thickness of about 0.015 inches.
28. A method of making an aluminum titanate-based ceramic body comprising:
- (a) formulating a batch of inorganic raw materials comprising sources of silica, alumina, strontium, titania, and/or iron oxide together with organic processing comprising plasticizers, lubricants, binders, and water as solvent, and mixing to form a homogeneous and plasticized mixture;
 - (b) shaping the plasticized mixture into a green body;
 - (c) heating the green body at 20-40°C/hr over various temperature intervals with hold temperature and times between 1100°-1650°C for a period of 30-50 hours to develop a ceramic having a composition comprising $u (\text{Al}_2\text{O}_3\text{-TiO}_2) + v (\text{R}) + w (3\text{Al}_2\text{O}_3\text{-}2\text{SiO}_2) + x (\text{Al}_2\text{O}_3) + y (\text{SiO}_2) + z (1.1\text{SrO-}1.5\text{Al}_2\text{O}_3\text{-}13.6\text{SiO}_2\text{-TiO}_2) + a (\text{Fe}_2\text{O}_3\text{-TiO}_2) + b (\text{MgO-}2\text{TiO}_2)$, where, R is SrO-Al₂O₃-2SiO₂ or 11.2SrO-10.9Al₂O₃-24.1SiO₂-TiO₂, where u, v, w, x, y, z, a and b are weight fractions of each component such that $(u+v+w+x+y+z+a+b=1)$, and $0.5 < u \leq 0.95$, $0.01 < v \leq 0.5$, $0.01 < w \leq 0.5$, $0 < x \leq 0.5$, $0 < y \leq 0.1$, $0 < z \leq 0.5$, $0 < a \leq 0.3$, and $0 < b \leq 0.3$.
29. The method of claim 28 wherein the heating is between 1100°-1500°C.
30. The method of claim 28 wherein the shaping is done by extrusion.
31. The method of claim 30 wherein the plasticized mixture is extruded into a honeycomb green body.
32. The method of claim 28 wherein the ceramic has a composition comprising $u (\text{Al}_2\text{O}_3\text{-TiO}_2) + v (\text{R}) + w (3\text{Al}_2\text{O}_3\text{-}2\text{SiO}_2) + x (\text{Al}_2\text{O}_3) + y (\text{SiO}_2) + z (1.1\text{SrO-}1.5\text{Al}_2\text{O}_3\text{-}13.6\text{SiO}_2\text{-TiO}_2) + a (\text{Fe}_2\text{O}_3\text{-TiO}_2) + b (\text{MgO-}2\text{TiO}_2)$, where, R is SrO-Al₂O₃-2SiO₂ or 11.2SrO-10.9Al₂O₃-24.1SiO₂-TiO₂, where u, v, w, x, y, z, a and b are weight fractions of each component such that $(u+v+w+x+y+z+a+b=1)$, and $u = 0.6965$, $v = 0.225$, $w = 0.075$, $x = 0$, $y = 0$, $z = 0$, $a = 0.0035$, and $b = 0$.